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Satoshi Sano

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EXAMINER

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The time period for reply, if any, is set in the attached communication.

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* SATOSHI SANO, YASUhide IWAMOTO, FUMIHIKO  
NAKAZAWA, and NOBUYASU YAMAGUCHI

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Appeal 2007-3054  
Application 09/875,084  
Technology Center 2600

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Decided: June 30, 2008

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Before KENNETH W. HAIRSTON, JOHN A. JEFFERY, and MARC S.  
HOFF, *Administrative Patent Judges*.

HAIRSTON, *Administrative Patent Judge*.

Opinion concurring-in-part and dissenting-in-part filed by Administrative  
Patent Judge JEFFERY.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. §§ 6(b) and 134 from the final  
rejection of claims 1 to 4, 6, and 7.

The disclosed invention relates to an optical scanning-type touch  
panel that uses an optical scanning unit for angularly scanning light in the  
touch panel, and a mirrored deflecting unit for deflecting scanning light from  
the optical scanning unit to a light receiving unit to thereby detect a scanning

light cut-off position that is produced in the touch panel by an indicator (e.g., a stylus or a finger) (Figures 1 to 3; Specification 3, 4, and 9 to 13). The deflecting unit has an asymmetrical shape about an optical axis (Specification 4, 14, 16, 19, and 26).

Claim 1 is representative of the claimed invention, and it reads as follows:

1. An optical scanning-type touch panel, comprising:  
an optical scanning unit for angularly scanning light in a plane substantially parallel to a predetermined region;  
a mirrored deflecting unit for deflecting scanning light of said optical scanning unit; and  
a light receiving unit for receiving the deflected scanning light, for detecting a scanning light cut-off position, which is produced in said predetermined region by an indicator, based on a light receiving output of said light receiving unit that corresponds to a scanning angle,  
wherein said deflecting unit has an asymmetrical shape about an optical axis.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Caswell	US 4,762,990	Aug. 9, 1988
Brandt	US 5,438,446	Aug. 1, 1995
Sano <sup>1</sup>	EP 0 897 161A1	Feb. 17, 1999

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<sup>1</sup> In the grounds of rejection, the Examiner refers to this European Patent

The Examiner rejected claims 1 and 2 under 35 U.S.C. § 102(b) based upon the teachings of Caswell.

The Examiner rejected claim 6 under 35 U.S.C. § 102(e) based upon the teachings of Sano.

The Examiner rejected claims 3 and 4 under 35 U.S.C. § 103(a) based upon the teachings of Caswell.

The Examiner rejected claim 7 under 35 U.S.C. § 103(a) based upon the teachings of Caswell and Brandt.

Turning first to the anticipation rejection of claims 1 and 2, the Examiner contends that the deflecting unit 32 in Figure 10 of Caswell has an asymmetrical shape about an optical axis (Ans. 3), whereas Appellants contend that the arc shaped reflector 32 does not have an asymmetrical shape because of the presence of central opening 33 (App. Br. 9).

Caswell specifically states that Figure 10 shows an arc shaped reflector that has a central opening 33 (col. 7, ll. 5 to 9). Caswell is silent as to whether the concave reflector/deflector 32 has a symmetrical shape or an asymmetrical shape. No matter how one orients the reflector/deflector 32 about any optical axis, the concave shape of the reflecting/deflecting unit remains the same. Stated differently, the light reflected/deflected from the reflecting/deflecting unit may in fact have an asymmetrical shape when it strikes the photocell 9, as indicated in the dissent *infra*, but that does not change the fact that the shape of the reflector/deflector remains the same

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Application by the applicant (i.e., Fujitsu) as opposed to the inventor (i.e., Sano) (Ans. 3 and 4).

(i.e., concave). Accordingly, in the absence of a specific disclosure in Caswell that the shape of the reflector/deflecting unit is asymmetrical, we will not resort to speculation that the reflector/deflector 32 has an asymmetrical shape.

Thus, the anticipation rejection of claims 1 and 2 is reversed because each and every limitation in the claims is not found either expressly or inherently in the cited reference to Caswell. *In re Crish*, 393 F.3d 1253, 1256 (Fed. Cir. 2004).

Turning to the anticipation rejection of claim 6, the Examiner contends that the optical scanning-type touch panel in Figure 3 of Sano satisfies the condition expressed by the equation in claim 6. For support, the Examiner refers to a copy of Sano's Figure 3 that was attached to the Final Rejection (Ans. 4). Appellants contend that the Examiner can not supply a dimension or angle size to Figure 3 of Sano when such a scanning start angle value is not set forth in Sano (App. Br. 18 and 19).

We agree with Appellants' argument that the Examiner has made modifications to Sano's Figure 3 that are not supported by the disclosure in Sano. *See In re Wright*, 569 F.2d 1124, 1127 (CCPA 1977). ("Absent any written description in the specification of quantitative values, arguments based on measurement of a drawing are of little value."); *In re Wilson*, 312 F.2d 449, 454 (CCPA 1963) ("Patent drawings are not working drawings [and arguments are not persuasive when based on a] drawing obviously never intended to show the dimensions of anything."). Accordingly, the anticipation rejection of claim 6 is reversed.

Turning next to the obviousness rejection of dependent claims 3 and 4, we hereby reverse this rejection for the reason *supra* that the anticipation rejection of independent claim 1 was reversed.

Turning lastly to the obviousness rejection of claim 7, the Examiner acknowledges (Ans. 5 and 6) that the optical scanning mirror in Caswell does not have a protective film, but states that Figures 5 and 6 and column 6, lines 26 to 47 in Brandt disclose reflectance of an aluminum mirror substrate that has a SiO<sub>2</sub> protective film of the optimal thickness to minimize reflectance variations in the range of incident light scanning angles that correspond to scanning angles at which a quantity of reflected light is minimum (Ans. 6). Inasmuch as overlapping angles of incidence of the source light and the same type of protective film are disclosed by Appellants (Specification 20) and Brandt (col. 6, ll. 26 to 54), and both the Appellants and Brandt recognize the interrelationship between reflectance, the angles of incidence, and thickness of the protective film, we agree with the Examiner that it would have been obvious to the skilled artisan to provide the protective film teachings of Brandt to the optical scanning mirror described by Caswell for the recognized reflectance advantages described by Brandt (Ans. 6). The obviousness rejection of claim 7 is sustained because the Examiner's articulated reason for combining the teachings of Brandt with those of Caswell supports a legal conclusion of obviousness. *KSR Int'l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007).

The decision of the Examiner is, therefore, reversed as to claims 1 to 4, and 6, and affirmed as to claim 7.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

JEFFERY, *Administrative Patent Judge*, CONCURRING-IN-PART,  
DISSENTING-IN-PART:

I concur with the majority's decision regarding claims 3, 4, 6, and 7. I respectfully dissent, however, from the majority's reversal of the Examiner's anticipation rejection of claims 1 and 2. For the reasons that follow, I would affirm the Examiner's rejection of those claims.

Regarding claims 1 and 2, the dispositive issue is whether Caswell's arc shaped reflector 32<sup>2</sup> in Figure 10 has an asymmetrical shape about an optical axis, as claimed. The majority finds that since this reflector has a central opening 33, it would be speculative to conclude that the reflector has an asymmetrical shape or that light deflected by the reflector would have an asymmetrical shape (Maj. Op. 3).

However, in my view, Caswell's arc shaped reflector fully meets this disputed limitation in view of its sheer scope and breadth. Significantly, the claim merely calls for the deflecting unit to have an asymmetrical shape about *an* optical axis (emphasis added). That is, the claim does not specify *which* optical axis about which the deflecting unit is asymmetrical (e.g., a central axis). Rather, all the claim requires is asymmetry about some unspecified optical axis.

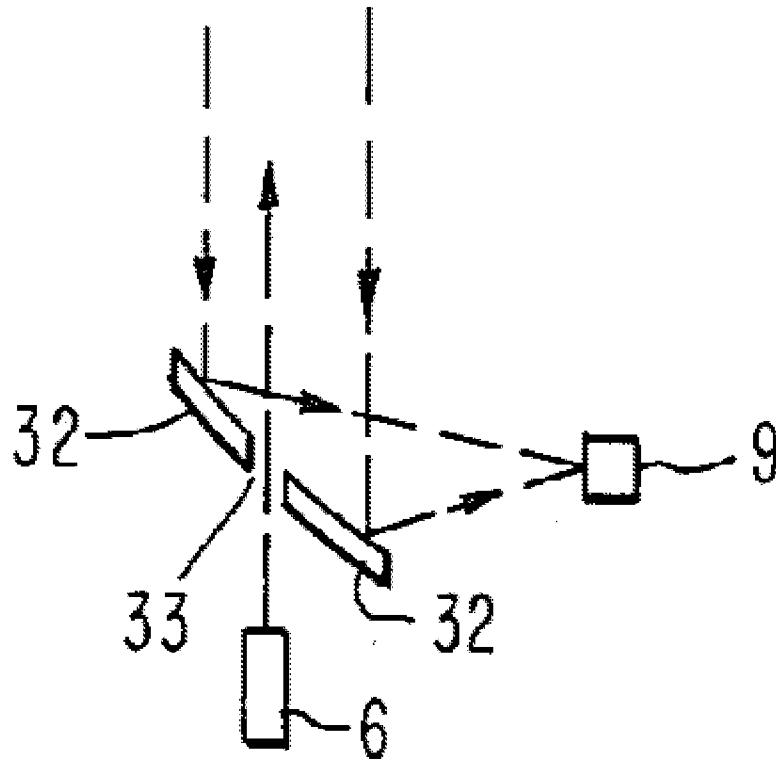
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<sup>2</sup> The Examiner indicates that this reflector in Caswell corresponds to the recited deflecting unit (Ans. 3) – a finding that is undisputed.



Turning to Caswell, the arc shaped reflector 32 shown in Figure 10 has a central opening 33 that permits light from the laser 6 to pass therethrough. Retroreflected light, however, is converged onto photocell 9 (Caswell, col. 7, ll. 5-9; Fig. 10).

Appellants emphasize that the presence of the reflector's central opening results in the reflector being symmetrical *with respect to an optical axis of the optics used to create the laser beam from laser 6* (App. Br. 9; emphasis added). Even assuming that this is correct (notwithstanding the skewed relationship of the reflector with respect to axis of the laser beam), Appellants' argument nonetheless pertains to *only one* optical axis – the axis of the laser beam. The claim, however, does not preclude the asymmetrical shape of the reflector with respect to other optical axes shown in Figure 10, namely those axes associated with the retroreflected light. Figure 10 of Caswell is reproduced below and enlarged for clarity:



Enlarged Reproduction of Figure 10 of Caswell

As shown in the enlarged reproduced figure above, the retroreflected light (i.e., represented by the downward and right-facing arrows) has a number of optical axes that are not only parallel to the laser beam's optical axis, but also disposed at an angle thereto. *With respect to these axes*, the shape of the reflector is clearly asymmetrical and, in my view, fully meets the disputed limitation of claim 1.

Therefore, even if the reflector is symmetrical about some optical axis as Appellants contend,<sup>3</sup> the limitation is nonetheless fully met so long as the reflector is asymmetrical about another optical axis. For the foregoing reasons, I find ample evidence of such asymmetry in Caswell. Therefore, I would affirm the Examiner's rejection of claim 1 and claim 2 for similar reasons.

tdl/gw

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<sup>3</sup> In this regard, Appellants' measurements of both sides of Caswell's arc shaped reflector in Figure 10 as being "slightly more than 5 mm in length" (App. Br. 9-10) hardly establish that the reflector is symmetrical about an optical axis. It is well settled that, absent evidence to the contrary, patent drawings are not drawn to scale and do not precisely define relative proportions of the elements. *Hockerson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3d 951, 956 (Fed. Cir. 2000) ("[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.").